

1. BOSC 2017 Nominations

Self Nomination:

No

Nominator Information

First Name

Exemption 6

[REDACTED]

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Mobile Phone

Nominee Information

First Name

Timothy

Last Name

Davis

Nominee Title

Associate Professor

Street Address

217 Life Sciences Building

City

Bowling Green

State

OH

Postal Code

43403

Email Address

timdavi@bgsu.edu

Phone Number

419-372-2332

Mobile Phone

Exemption 6

Employment Information**Place of Employment/Work:**

Bowling Green State University (start date: August, 2017)

Work Street Address

217 Life Sciences

Work City

Bowling Green

Work State:

OH

Work Postal Code

43403

Work Phone Number

419-372-2332

Work Email Address

timdavi@bgsu.edu

Sector

Academia

Qualifications**Primary Area(s) of Expertise**

Cyanobacteria/Harmful Algal Blooms; Biology-microbiology/molecular ecology; Ecology-aquatic/systems ecology

Committee Preference(s)

Executive Committee

Safe and Sustainable Water Resources Subcommittee

Statement of Interest

Dr. Timothy Davis will be joining the faculty of Bowling Green State University in August 2017 as an Associate Professor in the Department of Biological Sciences. His current position is at the NOAA Great Lakes Environmental Research Laboratory (GLERL) where he leads the HAB monitoring, experiments, and emerging technology program.

Dr. Davis' research seeks to improve our understanding of Harmful Algal Blooms (HABs) to aid in developing mitigation strategies to reduce their negative socioeconomic and environmental impacts in the Great Lakes region.

Dr. Davis' research uses advanced molecular techniques (qPCR and -omics) to study cyanobacterial HABs with an emphasis on studying the effects of anthropogenic influences on the population dynamics, ecosystem services, and toxicity in freshwater ecosystems in the USA, Canada, Australia and China. A secondary research effort is focused around water quality modeling and bloom forecasting. Being able to accurately forecast bloom location, density and toxicity is critical for water managers to ensure public safety

during bloom periods. Finally, Dr. Davis uses emerging technologies, such as the Environmental Sample Processor, to monitor HAB species and their toxins in near real-time. Through these efforts he has developed a diverse skill set that incorporates chemical, biological, as well as molecular techniques to study these important problems.

Skills/qualifications related to committee preference(s) specified

Dr. Davis enjoys an international reputation as a leader in the field of cyanobacterial harmful algal blooms. He is an elected member of National HAB Committee (NHC) and Chair of the Freshwater HABs Subcommittee within the NHC (<http://www.whoi.edu/page.do?pid=13935>) which was established to provide a collective voice of the academic, management and stakeholder communities interested in national HAB issues. The need for the NHC was identified in HARRNESS (Harmful Algal Research and Response: A National Environmental Science Strategy (2005)) - the U.S. National Program for HABs. The National Office for Harmful Algal Blooms is located at Woods Hole Oceanographic Institution.

Dr. Davis is also the U.S. Co-Chair of the Great Lakes Water Quality Agreement Annex 4 Algae and Lake Monitoring Workgroup. The Great Lakes Water Quality Agreement is a commitment between the United States and Canada to restore and protect the waters of the Great Lakes. The Agreement provides a framework for identifying bi-national priorities and implementing actions that improve water quality. EPA coordinates U.S. activities under the Agreement, which was originally signed in 1972 and has been amended several times since.

During his time with NOAA, Dr. Davis was a member of, and the Great Lakes Subgroup Lead for, the Harmful Algal Bloom and Hypoxia Research and Control Amendments Act of 2014 (HABHRCA) Interagency Working Group (IWG). The IWG is responsible for composing a series of reports to both the President and Congress regarding the state of HABs and hypoxia across the nation. The Great Lakes subgroup that Dr. Davis helped lead drafted an interagency report titled: Harmful Algal Blooms and Hypoxia in the Great Lakes Research Plan and Action Strategy: An Interagency Report. This report synthesized the current state of the science, defined knowledge gaps, and presented an action strategy for filling those gaps. The report informed our Federal leaders, regional stakeholders, and citizens of the most important research questions that must be investigated to better address these two critical water quality issues impacting the Great Lakes. The HABHRCA IWG is co-led by NOAA and EPA.

Dr. Davis completed his Bachelor's of Science degree at Southampton College of Long Island University in 2004. He then moved to Stony Brook University where he conducted his dissertation research focusing on understanding the environmental drivers of HABs in several lakes found throughout the northeast United States including Lake Erie and Lake Champlain. After completing his dissertation in 2009, Dr. Davis moved to Brisbane, Australia to continue his work at the Australian Rivers Institute. He spent the next two years studying the ecology of the toxic HABs that occur in drinking water reservoirs serving the greater Brisbane population of almost two million people. In 2012, Dr. Davis moved to the Canadian Center for Inland Waters in Burlington, Ontario. For the next year he investigated the water quality and harmful algal bloom issues in Lake Erie, Lake Ontario, Lake Huron and Lake Winnipeg. Dr. Davis currently leads NOAA Great Lakes Environmental Research Laboratory's (GLERL) HAB monitoring, experiments and emerging technology program. This is a diverse program that requires coordination of several groups focused on various aspects of Great Lakes cyanobacterial harmful algal bloom research as well as a number of bi-national collaborations.

Other Relevant Information

CV/Resume URL

2. CV/Resume

Please upload your CV/ Resume.

[Davis.pdf](#)

3.

BOSC Nomination

Jun 16, 2017 10:24:43 Success: Email Sent to: tracy.tom@epa.gov

4. Thank You for your Submission!

Timothy Walter Davis PhD
Associate Professor, Department of Biological Sciences
Bowling Green State University
Bowling Green, OH 43403

Education:

Bachelor of Science- Marine Science- Concentration: Biology- 2004- Southampton College of Long Island University- **Summa cum Laude**

Doctorate of Philosophy- Marine and Atmospheric Science- Conferred: December 22, 2009- Stony Brook University; Dissertation title: Effects of nutrients, temperature, and zooplankton grazing on toxic and non-toxic strains of the harmful cyanobacterium *Microcystis* spp.

Awards and Honors:

2016 NOAA Bronze Medal Award - For response activities for the Lake Erie harmful algal bloom that impacted drinking water supplies in Ohio and Michigan

Professional Experience:

Associate Professor – Department of Biological Sciences, Bowling Green State University, Bowling Green, OH 43403, August 2017 - Present

Research Scientist – NOAA-Great Lakes Environmental Research Laboratory, Ann Arbor, MI, 48108, March 2014 – August, 2017

NSERC (Natural Sciences and Engineering Research Council of Canada) Research Fellow- Dr. Susan Watson, Watershed Hydrology and Ecology Research Division, Environment and Climate Change Canada, Canadian Centre for Inland Waters, Burlington ON L7R 4A6, Canada, December 2012 - March 2014

Queensland Smart Futures Fellow, 2012 Australian Rivers Institute, Griffith University, Nathan Queensland 4111. Project Title: *New technologies for identifying emerging cyanotoxin producers and their prevalence under a changing climate*

Team leader- *Cylindrospermopsis raciborskii* genome comparison project, 2010 - 2012

Post-doctoral Research Fellow- Prof. Michele Burford- Australian Rivers Institute, Griffith University, Nathan, Queensland 4111, Australia, December 2009 - January 2012

Graduate Research Assistant- Prof. Christopher Gobler- School of Marine and Atmospheric Sciences, Stony Brook University, Stony Brook, NY 11794 USA, January 2004 - December 2009

Publications:

McKay, R.M., Tuttle, T., Reitz, L., Bullerjahn, G.S., Cody, W., McDowell, A., **Davis, T.W.**, *submitted*. Early onset of a microcystin-producing cyanobacterial bloom in the Maumee River (OH, USA). *Chinese Journal of Oceanology and Limnology*, May, 2017.

Huang, Y., Chen, G., Zhang, H., Li, P., Chen, X., **Davis, T.W.**, *submitted*. Living *Microcystis* should be taken into account when studying nitrate removal at sediment-water interface. *Environmental Science and Technology*, May, 2017.

- Steffen Wurch, M.M., **Davis, T. W.**, Stough, J.M.A., McKay, R.M.L, Bullerjahn, G.S., Krausfeldt, L.E., Neitzey, M.L., Boyer, G.L., Johengen, T.H., Gossiaux, D.C., Burtner, A.M., Palladino, D., Rowe, M., Dick, G., Meyer, K.A., Levy, S., Boone, B., Stumpf, R.P., Wyne, T.T., Wilhelm, S.W., *accepted*. Ecophysiological examination of the lake Erie *Microcystis* bloom in 2014: linkages between biology and the water supply shutdown of Toledo, OH. *Environmental Science & Technology*, May, 2017
- Meyer, K., **Davis, T.W.**, Watson, S. A., Berry, M.A., Denef, V.J., Dick, G.J., *submitted*. Genome sequences of lower Great Lakes *Microcystis* strains reveal strain-specific genes that are present and expressed during western Lake Erie blooms. *PLoS ONE*, January, 2017.
- Berry, M.A., White, J.D., **Davis, T.W.**, Jain, S., Johengen, T.H., Dick, G.J., Sarnelle, O., Denef, V.J., 2017. Are oligotypes meaningful ecological and phylogenetic units: a case study of *Microcystis* in freshwater lakes. *Frontiers in Microbiology*, 8:365. doi: 10.3389/fmicb.2017.00365.
- Berry, M.A., **Davis, T. W.**, Cory, R.M., Duhaime, M.B., Johengen, T.H., Kling, G.W., Marino, J.A., Den Uyl, P.A., Gossiaux, D.C., Dick, G.J., Denef, V.J., *in press*. Cyanobacterial harmful algal blooms are a biological disturbance to western Lake Erie bacterial communities, *Environmental Microbiology*, November, 2016.
- Rowe, M.D., Anderson, E.J., Wynne, T.T., Stumpf, R.P., Fanslow, D.L., Kijanka, K., Vanderploeg, H.A., **Davis, T.W.**, 2016. Vertical distribution of buoyant *Microcystis* blooms in a Lagrangian particle tracking model for short-term forecasts in Lake Erie. *Journal of Geophysical Research – Oceans*, 121, doi:10.1002/2016JC011720.
- Cory, R.M., **Davis, T.W.**, Dick, G.J., Johengen, T., Denef, V.J., Berry, M., Page, S.E., Watson, S.B., Yuhas, K., Kling, G.W., 2016. Seasonal dynamics in dissolved organic matter, hydrogen peroxide, and cyanobacterial blooms in Lake Erie. *Frontiers in Marine Science*, 3:54. doi: 10.3389/fmars.2016.00054.
- Reavie, E.D., Cai, M., Twiss, M.R., Carrick, H.J., **Davis, T.W.**, Johengen, T. H., Gossiaux, D., Smith, D.E., Palladino, D., Burtner, A., Sgro, G.V., 2016. Winter-spring diatom production in Lake Erie is an important driver of summer hypoxia. *Journal of Great Lakes Research*, 42, 608-618.
- Davis, T.W.**, Gobler, C.J., 2016. Preface for Special Issue on *Global Expansion of Harmful Cyanobacterial Blooms: Diversity, ecology, causes, and controls*. *Harmful Algae*, 54: 1-3.
- Bullerjahn, G.S., McKay, R.M., **Davis, T.W.**, and 18 others, 2016. Global solutions to regional problems: collecting global expertise to address the problem of harmful algal blooms - A Lake Erie case study. *Harmful Algae*, 54: 223-238.
- Stumpf, R.P., **Davis, T.W.**, Wynne, T.T., Graham, J.L., Loftin, K.A., 2016. Strategies for mapping cyanobacteria toxin patterns with remotely sensed data. *Harmful Algae*, 54: 160-173.
- Gobler, C.J., Burkholder, J.M., **Davis, T.W.**, Harke, M.J., Stow, C.A., Van de Waal, D.B., 2016. The dual role of nitrogen supply in controlling the growth and toxicity of cyanobacterial blooms. *Harmful Algae*, 54: 87 – 97.
- Visser, P.M., Verspagen, J.M.H, Sandrini, G., Stal, L.J., Matthijs, H.C.P., **Davis, T.W.**, Paerl, H.W., Huisman, J., 2016. How rising CO₂ and global warming may stimulate harmful cyanobacterial blooms. *Harmful Algae*, 54: 145-159.
- Harke, M.J., **Davis, T.W.**, Watson, S.B., Gobler, C.J., 2016. Nutrient-controlled niche differentiation of western Lake Erie cyanobacterial populations revealed via metatranscriptomic surveys. *Environmental Science and Technology* 50: 604 – 615.
- Davis, T.W.**, Bullerjahn, G.S., Tuttle, T., McKay, R.M., Watson, S.B., 2015. Effects of increasing nitrogen and phosphorus concentrations on the growth and toxicity of

- Planktothrix blooms in Sandusky Bay, Lake Erie. *Environmental Science & Technology*, 49(12): 7197-7207.
- Kopf, A., and 164 other authors, 2015. The Ocean Sampling Day consortium. *GigaScience*, 4:27, DOI 10.1186/s13742-015-0066-5.
- Davis, T.W.**, Watson, S.B., Rozmarynowycz, M.J., Ciborowski, J., McKay, R.M., Bullerjahn, G., 2014. Phylogenies of microcystin-producing cyanobacteria in the lower Laurentian Great Lakes suggest extensive genetic connectivity. *PLoS ONE* 9(9): e106093. doi:10.1371/journal.pone.0106093.
- Burford, M.A., **Davis, T.W.**, Orr, P.T., Sinha, R., Willis, A., Neilan, B.A., 2014. Nutrient-related changes in the toxicity of field blooms of the cyanobacterium, *Cylindrospermopsis raciborskii*. *FEMS Microbiology Ecology* 89: 135-148.
- Sinha, R., Pearson, L.A., **Davis, T.W.**, Muenchhoff, J., Pratama, R., Jex, A., Burford, M.A., Neilan, B.A., 2014. Comparative genomics of *Cylindrospermopsis raciborskii* strains with differential toxicities. *BMC Genomics*, DOI: 10.1186/1471-2164-15-83.
- Davis, T.W.**, Orr, P.T., Boyer, G.L., Burford, M.A., 2014. Investigating the production and release of cylindrospermopsin and deoxy-cylindrospermopsin by *Cylindrospermopsis raciborskii* over a natural growth cycle. *Harmful Algae* 31: 18-25
- Muhid, P., **Davis, T.W.**, Bunn, S.E., Burford, M.A., 2013. Effects of inorganic nutrients in potable recycled water on freshwater phytoplankton biomass and composition. *Water Research* 47: 384-394.
- Davis, T.W.**, Koch, F., Marcoval, M.A., Wilhelm, S.W., Gobler, C.J., 2012. Mesozooplankton and microzooplankton grazing during cyanobacterial blooms in the western basin of Lake Erie. *Harmful Algae* 15: 26-35.
- Sinha, R., Pearson, L.A., **Davis, T.W.**, Burford, M.A., Orr, P.T., Neilan, B.A. 2012. Increased incidence of *Cylindrospermopsis raciborskii* in temperate zones - is climate change responsible? *Water Research* 46: 1408-1419.
- O'Neil, J.M., **Davis, T.W.**, Burford, M.A., Gobler, C.J., 2012. The rise of harmful cyanobacteria blooms (CHABs): Role of eutrophication and climate change in freshwater, estuarine and marine ecosystems. *Harmful Algae* 14: 313-334.
- Burford, M.A., **Davis, T.W.**, 2011. Physical and chemical processes promoting dominance of the toxic cyanobacterium *Cylindrospermopsis raciborskii*. *Chinese Journal of Oceanology and Limnology* 29: 883-891.
- Davis, T.W.**, Gobler, C.J., 2011. Grazing by mesozooplankton and microzooplankton on toxic and non-toxic strains of *Microcystis* in the Transquaking River, a tributary of Chesapeake Bay. *Journal of Plankton Research* 33: 415-430.
- Davis, T.W.**, Harke, M.J., Marcoval, M.A., Goleski, J., Orano-Dawson, C., Berry, D.L., Gobler, C.J., 2010. Effects of nitrogenous compounds and phosphorus on the growth of toxic and non-toxic strains of *Microcystis* during cyanobacterial blooms. *Aquatic Microbial Ecology* 61: 149-162.
- Davis, T.W.**, Berry, D.L., Boyer, G.L., Gobler, C.J., 2009. The effects of temperature and nutrients on the growth and dynamics of toxic and non-toxic strains of *Microcystis* during cyanobacteria blooms. *Harmful Algae* 8: 715-725.
- Gobler, C.J., **Davis, T.W.**, Deonarine, S.N., Saxton, M., Jochem, F., Wilhelm, S.W. 2008. Grazing and virus-induced mortality of microbial populations before and during the onset of hypoxia in Lake Erie. *Aquatic Microbial Ecology* 51: 117-128.
- Gobler, C.J., **Davis, T.W.**, Coyne K.J., Boyer, G.L. 2007. Interactive influences of nutrient loading, zooplankton grazing, and microcystin synthetase gene expression on cyanobacterial bloom dynamics in a eutrophic New York lake. *Harmful Algae* 6: 119-133.

Gobler, C. J., Thibault, D.B., **Davis, T.W.**, Curran, P.B., Peterson, B.J., Liddle, L.B. 2006. Algal assemblages associated with *Stegastes* sp. territories on Indo-Pacific coral reefs: Characterization of diversity and controls on growth. *Journal of Experimental Marine Biology and Ecology* 336: 135-145.

Unpublished/non-peer-reviewed reports:

Wynne, T.T., **Davis, T.W.**, Kelty, R., Anderson, E.J., Joshi, S.J., 2015. NOAA forecasts and monitors blooms of toxic cyanobacteria in Lake Erie. *NYWEA ClearWaters* 45: 21-25.

Davis, T.W., Watson, S.B., 2013. Advancing cHAB monitoring efforts in Hamilton Harbour: Incorporating molecular methods to detect potential toxin producers. Hamilton Harbour Watershed Monitoring and Research Report, 8pp.

Funding:

Current

1. 2017-2018, Project Title: *Decision support tools to link P reductions to harmful algal blooms and source water protection*, Principal investigator: Dr. Timothy Davis, NOAA GLERL, Budget **\$1,399,909 USD**, Funded by: Great Lakes Restoration Initiative (EPA) **Role: PI.**
2. 2016-2017, Project Title: *Harmful algal bloom monitoring program to inform ecological forecasting and decision support tools*, Principal investigator: Dr. Timothy Davis, NOAA GLERL, Budget **\$849,000 USD**, Funded by: Great Lakes Restoration Initiative (EPA) **Role: PI.**
3. 2016-2017, Project Title: *Development of a sandwich hybridization assay to detect Microcystis for use on the Environmental Sample Processor*, Principal investigator: Dr. Timothy Davis, NOAA GLERL, Budget **\$29,824 USD**, Funded by: Great Lakes Restoration Initiative (EPA) **Role: PI.**
4. 2017, Project Title: *Investigating the impacts of invasive dreissenid mussels on the phytoplankton community composition in Lake Winnipeg, Manitoba*, Principal investigator: Dr. Timothy Davis, NOAA GLERL, Budget **\$4,000 USD**, Funded by: NOAA GLERL **Role: PI.**
5. 2016-2017, Project Title: *Investigating the effects of short-term nutrient enrichment on the growth, community structure and toxicity of Microcystis blooms in Dianshan Lake using genetics and traditional limnological techniques*, Principal investigator: Dr. Xuechu Chen, East China Normal University, Budget **\$10,000 USD**, Funded by: East China Normal University, **Role: Co-PI.**
6. 2016-2021, Project Title: *The Alliance for Coastal Technologies: National-Scale Efforts Toward Evaluation of Observing Technologies*, Principal investigator: Mario Tamburri, Chesapeake Biological Laboratory/University of Maryland Center for Environmental Science, Budget **\$7,622,591 USD**, GLERL-specific: **\$100,186 USD** from 2016-2018, Funded by: National Oceanic and Atmospheric Administration: Integrated Ocean Observing System (IOOS[®]), **Role: Co-PI.**
7. 2016-2018, Project Title: *Cyanobacterial Harmful Algal Bloom Ecology and Cyanotoxin Production in Green Bay, Lake Michigan*, Principal Investigator: Dr. Todd Miller, University of Wisconsin-Milwaukee, Budget: **\$50,000 USD**, Funded by: CILER Great Lakes Long-term Fellowship Program, **Role: Co-PI.**
8. 2014-2016, Project Title: *Multidisciplinary rapid assessment (MRA) indicator of algal and bacterial community composition and harmful blooms*, Principal Investigator: Dr. Sue Watson, Environment Canada, Budget: **\$91,350 CAD**, Funded by: Strategic Technology Application of Genomics in the Environment (STAGE), **Role: Co-PI.**

Previous

1. 2015, Project Title: *Expanding environmental intelligence assets in western Lake Erie*, Principal Investigators: Dr. Timothy Davis and Mr. Steve Ruberg, NOAA GLERL, Budget: **\$900,000 USD**, Funded by: Great Lakes Restoration Initiative (EPA) **Role: PI**
2. 2015-2016, Project Title: *Assessment of ag watershed phosphorus loading impacts on HAB formation and nearshore water quality (Previously Decision Support Tools for Nearshore Water Quality FY13-14 and Develop Forecasting Models for Beach Water Quality FY10-FY12)*, Principal investigator: Dr. Timothy Davis, NOAA GLERL, Budget: **\$473,403 USD**, Funded by: Great Lakes Restoration Initiative (EPA) **Role: PI**
3. 2014-2015, Project Title: *Integrated field and laboratory investigation of links between nutrients, dissolved organic carbon, reactive oxygen species, and toxicity of harmful algal blooms*, Principal Investigator: Dr. Gregory Dick, University of Michigan, Budget: **\$25,000**, Funded by: CILER Great Lakes Long-term Fellowship Program, **Role: Co-PI**
4. 2013-2014, Project Title: *Coordinated Onboard Education & Outreach*, Principal Investigator: Dr. Janet Vail, Grand Valley State University, Budget: **\$250,000 USD**, Funded by: Great Lakes Restoration Initiative, **Role: Contributing author**
5. 2013-2014, Project Title: *Microcystis blooms and associated bird mortalities studies and investigation of Microcystis management options for the Paul S. Sarbanes Ecosystem Restoration Project at Poplar Island*, Principal Investigator: Dr. Kevin Sellner, Chesapeake Research Consortium, Molecular-specific budget: **\$18,500 USD**, Funded by: Maryland Environmental Service, **Role: Co-PI**
6. 2012-2015, Project Title: *New technologies for identifying emerging cyanotoxin producers and their prevalence under a changing climate*, Principal Investigator: Dr. Timothy Davis, Budget: **\$450,000 AUD**, Funded by: Queensland Government **Role: PI**
7. 2012-2014, Project Title: *Development of novel toxin detection methodologies applicable to marine and freshwater systems*, Principal Investigator: Assoc. Prof. Judy Westrick, Wayne State University, Budget: **\$133,797 USD**. Funded by: National Institute of Environmental Health Sciences (NIH), **Role: Co-PI**
8. 2012-2014, Project Title: *Development of novel toxin detection methodologies applicable to marine and freshwater systems*, Principal Investigator: Assoc. Prof. Judy Westrick, Wayne State University, Budget: **\$272,054 USD**. Funded by: National Science Foundation, **Role: Co-PI**
9. 2014, Project Title: *Investigating the environmental drivers of harmful cyanobacterial blooms in Lake St. Clair*, Principal Investigator: Prof. Jan Ciborowski, University of Windsor, Budget: **\$35,375 CAD**, Funded by: Science Horizons, **Role: Co-PI**
10. 2014-2015, Project Title: *Building capacity for freshwater science: Integrating microbial genomics, environmental chemistry, and ecosystem processes to understand harmful algal blooms*, Principal Investigator: Assist. Prof. Gregory Dick - University of Michigan, Budget: **\$249,485 USD**, Funded by: University of Michigan Water Center, **Role: Team member**
11. 2012, Project Title: *Transcriptomics: A new tool for understanding the ecology of toxic cyanobacteria*, Principal Investigator: Dr. Timothy Davis, Budget: **\$8,000 AUD**, Funded by: Griffith University, **Role: PI**
12. 2011-2012, Project Title: *Investigating the use of qPCR as an early warning system for toxic cyanobacteria blooms*, Principal Investigator: Assoc. Prof. Judy Westrick, Lake Superior State University, Budget: **\$30,000 USD**, Funded by: US EPA, **Role: Contributing author.**

Teaching Experience:

East China Normal University

Guest lecturer- Ecological Restoration- Dr. Xuechu Chen, 2016

University of Michigan

Co-instructor- MSci Summer STEM immersion course –‘The green monster in Lake Erie’- Summer 2016

Guest lecturer- Introduction to Environmental Geology- Dr. Rose Cory, 2015-present

Guest lecturer- Introduction to Oceanography- Dr. Brian Arbic, 2015- present

Inland Seas Education Association

Education Director- April 2012 – November 2012

Griffith University

Co-instructor-Ecological theory and practice -2051ENV- Dr. Guillermo Diaz-Pulido, Assoc. Prof. Fran Sheldon, Prof. Jane Hughes, Dr. Timothy Davis, Griffith University, Semester 2, 2011

Co-instructor-Science of water-Integrated Water Management masters program- International Water Centre, Brisbane 2011

Stony Brook University

Co-instructor-Environmental problems and solutions-MAR 340-Dr. - Spring 2009

Guest lecturer- Women in Science and Engineering (WISE)- Tara Duffy& Kestrel Perez- Stony Brook University, Fall 2008

Guest lecturer-Long Island Marine Habitats-MAR 303-Lyndie Hice & Tara Duffy- SoMAS, Stony Brook University, Fall 2008

Guest lecturer-Phytoplankton Ecology- MAR 515 -Dr. Chris Gobler-SoMAS, Stony Brook University, Fall 2006, Fall 2008

Guest lecturer-Plankton Ecology- MAR 366 -Dr. Chris Gobler-SoMAS, Stony Brook University, Fall 2006, Fall 2008

Teaching practicum-Biological Oceanography-MAR 347-Dr Christopher J. Gobler-SoMAS, Stony Brook University, Spring 2007

Teaching assistant- Experimental Marine Biology-MAR-S 305-Dr. Brad Peterson- SoMAS, Stony Brook University, Fall 2005

Student and postdoctoral mentorship:

Undergraduate and graduate students:

Ms. Eva Kramer- University of Toledo- 2017-Present- Ph.D committee member

Ms. Cherise Spotkaeff- Hawaii Pacific University- 2016-2018- NOAA Hollings Scholar

Mr. Kalen Robeson- The Ohio State University-2015-2017- NOAA Hollings Scholar

Ms. Sarah Bartlett- U. of Wisconsin-Milwaukee- 2015-Present- Ph.D committee member

Mr. Daniel Hoffman- Wright State U.- 2015-Present- Ph.D committee member

Ms. Taylor Tuttle- Bowling Green State U.- 2015-Present- Ph.D committee member

Mr. Derek Smith-U. of Michigan -2015 -Present- Ph.D student

Ms. Christine Knight-U. of Michigan-2014-Present- Master's student

Ms. Shelby Grassick-Environment Canada-2013-2014- Co-op student

Mr. Craig Irwin- Environment Canada-2013-2014- Co-op student

Ms. Jenisse German-Environment Canada-2013- Co-op student

Mr. Jack Calder-Environment Canada-2013- Co-op student

Ms. Maisa Fumagalli-Environment Canada-2013- Co-op student
Ms. Rati Sinha-U. of New South Wales-2010-2012- Ph.D student
Mr. Sebastian Knight-Griffith University-2011- summer scholarship student
Mr. Matthew Harke-Stony Brook U.-2007-Summer research assistant
Mr. Justin Fischdicke-Stony Brook U.-2006- Summer research assistant

Postdoctoral fellows:

Dr. Kevin Meyer-U. of Michigan-2015-Present- Postdoctoral research fellow
Dr. Linda Novitski- NOAA 2015-Present- NOAA Knauss Policy Fellow

Service:

Reviewer - *Harmful Algae, Hydrobiologia, Limnology and Oceanography, European Journal of Phycology, Applied and Environmental Microbiology, Aquatic Microbial Ecology, Phycologia* and *Fundamental and Applied Limnology, Journal of Great Lakes Research*

Editorial Board (Review editor) - *Frontiers in Marine Science, Aquatic Microbiology*

Synergistic Activities:

US Co-Chair , Great Lakes Water Quality Agreement Annex 4 Algae and Lake Monitoring Work Group	2016 – present
Elected member , US National HAB Committee	2014 – present
Guest Editor , <i>Harmful Algae</i> issue on Cyanobacterial HABs	2014 – present
Great Lakes subgroup chair , Harmful Algal Bloom and Hypoxia Research and Control Act Interagency working group	2014 – present
Panel of Experts , Water Research Foundation	2016
Session co-chair , <i>Molecular approaches to understanding the drivers of CyanoHABs and toxin/metabolite production</i> , IAGLR, Guelph, ON, Canada	2016
Co-organizer , NSF/NOAA workshop on Cyanobacterial HABs (with George Bullerjahn and Robert Michael McKay, BGSU)	2014 – 2015
Session co-chair , <i>Using cutting-edge technologies to advance freshwater HAB monitoring and forecasting</i> , IAGLR, Burlington, VT	2015
Session co-chair , <i>Linking Genetics, toxicity and physiology of bloom-forming Cyanobacteria in large lakes</i> , JASM, Portland, OR	2014

Affiliations:

Global Lake Ecological Observatory Network (GLEON)

Presentations:

Invited (* denotes plenary or keynote)

Davis, T. W., Why it's better to be blue than green: Investigating the environmental drivers of cyanobacterial harmful algal bloom growth and toxicity in western Lake Erie, University of Toledo, November, 2016.

Davis, T.W., Why it's better to be blue than green: Investigating the environmental drivers of cyanobacterial harmful algal bloom growth and toxicity in western Lake Erie, East China Normal University, September, 2016.

***Davis, T.W.**, Blue Green Algae: The why, the risks and our role in taming it, Red Cedar Conference, March, 2016.

Davis, T.W., Using NOAA's harmful algal bloom monitoring and forecasting resources to help plan your trip, Ohio Charter Boat Captains Conference, March, 2016.

- Davis, T.W.**, NOAA-GLERL HAB research and monitoring program, NOAA Coastal Partners meeting, January, 2016.
- Davis, T.W.**, Why it's better to be blue than green: Investigating the environmental drivers of cyanobacterial harmful algal bloom growth and toxicity in western Lake Erie, Smith Lecture Series, University of Michigan, January, 2016.
- Davis, T. W.**, The Great Debate: Investigating the roles of nitrogen and phosphorus in driving growth and toxicity of cyanobacterial harmful algal blooms in western Lake Erie. McLane Research Laboratories seminar. Woods Hole, MA, December 2015.
- *Davis, T. W.**, NOAA-GLERL HAB research and monitoring program. International Environmental Academic Conference, Nanjing, China, November, 2015.
- Davis, T.W.**, The Great Debate: Investigating the roles of nitrogen and phosphorus in driving growth and toxicity of cyanobacterial harmful algal blooms in western Lake Erie. East China Normal University seminar series. Shanghai, China November, 2015.
- *Davis, T. W.**, Using advanced technologies to monitor, detect and understand the drivers of harmful algal blooms in the Laurentian Great Lakes, International Environmental Engineering Conference, Busan, Korea Oct. 28 - 30, 2015.
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Cruise Experience:

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US EPA Lake Erie HAB Cruise, Lake Guardian, September 2007.

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